

C Minor Final Documentation

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Brief Description Hudson Chou

C Minor was originally a project designed to connect minorities, specifically in the computer science field, on a common platform to organize events and connect individuals to willing mentors through a mentorship program. While the end result of our project failed to deliver the intended product, it was a good learning experience and we were still able to produce a somewhat functioning website with some of the original intended use cases.

Process Hudson Chou / Tiara Tan

The C-Minor project utilized an XP iterative development process to organize and operate. While the XP development process itself was very fitting for our type of project, we encountered many individual issues that delayed the development and progress.

Throughout the duration of the iterative development, there existed many issues, but none more significant than a failure to meet deadlines. Because our iterative process often relied on the completion of previous tasks to progress, any delays that occurred during one week at the very least delayed the entire project by another week. Another major issue that surfaced was the group's ability to physically collaborate during any set time. While the initial document listed a set meeting time on Mondays and Tuesdays from 6:30 onwards, group members would frequently miss these mandatory meetings which further exacerbated the delay in development. After the Github repository was completed, group members were expected to submit work individually on their own time even if they weren't able to make the weekly meetings. However, this was not the case as some group members felt other classes' work were more important. There was also a mindset of "failing is okay" despite the product having the same requirements at the end of the day. These factors combined created a snowball effect ultimately resulting in an incomplete product.

For testing, the C-Minor website was difficult to test with individual test cases as code was often refactored and changed in large ways, therefore all of the testing was completed through manual inputs. While this form of testing lacks the efficiency and scope of integration testing, it was sufficient and more convenient for our project.

As a result of Tiara's refactoring efforts, the final code underwent many structural improvements to not only make the code more readable, but also more easily modified for future development.

During our mini group meetings, Tiara and I (Hudson), utilized part of pair programming to not only decrease the amount of bugs within the code, but also increase the overall efficiency of developing the project. While we did not code on a single computer, we would often work on one problem in conjunction before tackling the next problem. This also helped counter the general group atmosphere of setting goals and then failing to meet them, as we would work together to slowly reach a solution. While this process was certainly slower than the "move fast and break things" methodology we originally started with, it guaranteed progress, which our group desperately needed.

Requirements and Specifications Tiara Tan

Use Case 1: Registering Users

Primary Actor: User

Goal in Context: Assign a role to users based on their chosen category

Scope: Takes Name, Email, and chosen category to return a valid user saved to the system

Level: Higher Level (Summary)

Stakeholders and Interests: Prospective Users

Precondition: Have an NYU email

Minimal Guarantees: Creating an account for an NYU student

Success Guarantees: Giving access to Forums, Mentorship, and Nearby Events through the user's personal account

Main Success Scenario: Able to navigate to the Forums, Mentorship, and Nearby Events page with your individual account

Trigger: Clicking the register button

Extensions: Accounts that are not associated with the NYU Email

Use Case 2: Setup Profile

Primary Actor: User

Goal in Context: Allow users to put up an individual biography about their interests and a picture

Scope: Available to all users who have registered an account

Level: User Goal

Stakeholders and Interests: Users

Precondition: User has completed registration and is currently logged in

Minimal Guarantees: Edit personal information

Success Guarantees: User profile has associated tags that allow for collation and establishing relationships

Trigger: Clicking "Edit Profile" button on profile page

Extensions: N/A

Use Case 3: Public Forums

Primary Actor: User

Goal in Context: Allow users to write and reply to forum threads

Scope: Available to all users who have registered a forum-specific account

Level: User Goal

Stakeholders and Interests: Users

Precondition: User has completed forum registration and is currently logged in

Minimal Guarantees: Post and reply to threads

Trigger: Entering the forum page

Extensions: Actually integrating the forums with our website in a more sensible, cohesive way and linking the forum account with the regular website account

Use Case 4: Mentor Catalogue

Primary Actor: User

Goal in Context: Connect a Mentor to a Mentee who shares similar interests

Scope: List of all mentors available to all users

Level: User Goal

Stakeholders and Interests: Users

Precondition: None

Minimal guarantees: List of mentors

Success Guarantees: List of mentors with similar interests to the user

Trigger: Entering the mentor catalogue page

Extensions: Search through different groups of mentors categorized by interest tags

Use Case 5: Events

Primary Actor: User

Goal in context: View all upcoming CS events and organizations at NYU Shanghai

Scope: Available to all users

Level: User Goal

Stakeholders and interests: Users

Precondition: None

Minimal guarantees: List of all upcoming CS events and organizations

Trigger: Entering the events page

Extensions: Spotlight organizations/events, search function, nearby events/organizations, specific event tags

Use Case 6: Add Event

Primary Actor: User (Organization Member)

Goal in context: Add an event to the events page

Scope: Available to users with registered accounts

Level: User Goal

Stakeholders and interests: Users

Precondition: User has completed registration and is logged in

Minimal guarantees: Add an event and have the event be shown on the all events catalogue

Trigger: Entering the events page and clicking “Add Event”

Extensions: Adding specific event tags

Use Case 7: Add Organization

Primary Actor: User (Organization Member)

Goal in context: Add an organization to the events page

Scope: Available to users with registered accounts

Level: User Goal

Stakeholders and interests: Users

Precondition: User has completed registration and is logged in

Minimal guarantees: Add an organization and have the organization be shown on the all organizations catalogue

Trigger: Entering the events page and clicking “Add Organization”

Extensions: Applying for Organization spotlight

Architecture and Design Hudson Chou

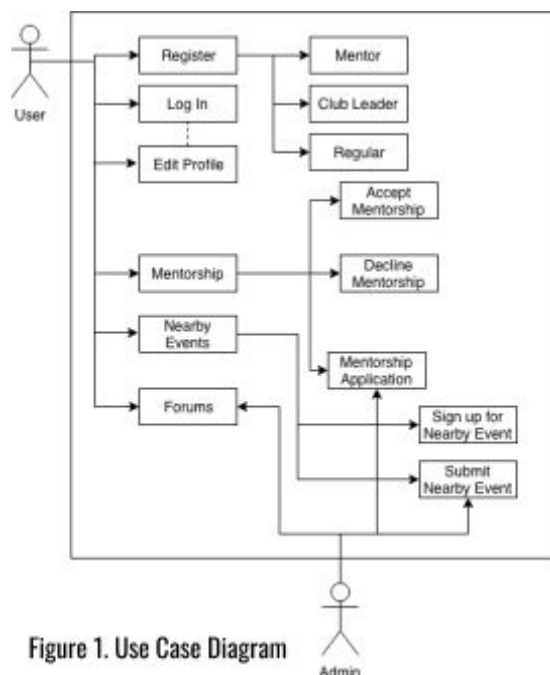


Figure 1. Use Case Diagram

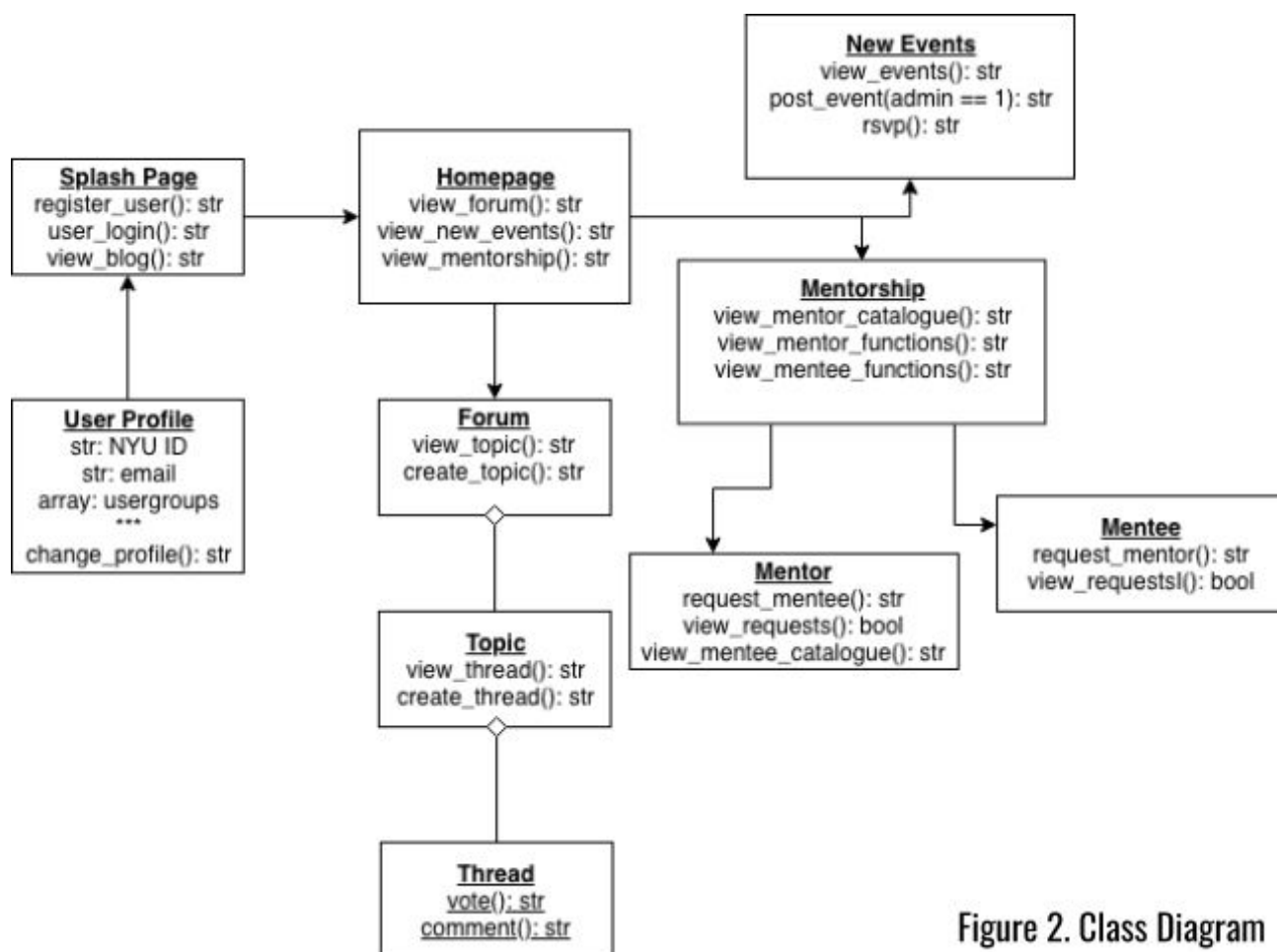


Figure 2. Class Diagram

Figure 2 showcases the class diagram for our website. While there are functions within the class diagram that are not yet implemented in our final product, key features like user profile and homepage are working based on the functions described above.

In this diagram of our website, users are required to login to access the rest of the features of the website. Once logged in, the Homepage acts as the hub to navigate the many different functionalities of the website. The most integral component of the website is the individual user. Every aspect of our website should preferably be linked to the user in some way to personalize the experience. In the current iteration,

user profiles are not yet linked to the forums but any future development should take into account the user's unique id. The overall project is designed with the user at the center and every facet of the website stemming from the user.

Reflections and Lessons Learned

Include personal reflections on the project and process by each team member. Describe what you learned.

Hudson

The software engineering project overall was an enjoyable experience. Having never worked with web development as a whole before, the project was a learning experience from start to finish. Learning PHP and trying to integrate it into our website was quite a challenge but the experience was worthwhile. As a group project, the project went terribly. Despite Tiara's and my best efforts in organizing and directing the group, the other two members of our group often missed deadlines and didn't show up to meetings. Without the assistance from our team members, planning iterations was quite difficult as we did not know whether certain parts of the website would be completed in a timely fashion. Other than the internal group struggles, working on the project with Tiara was both insightful and productive. The process of creating a website from scratch was much more challenging than I had previously expected, but a variant of pair programming and many late nights allowed us to complete the basics of the website. While the website as a whole was lacking a significant portion of what we originally promised, I am still content with the product we were able to produce considering the many problems that arose throughout the products development cycle. I believe the lesson learned was to pick better teammates. I do not believe there was anything Tiara and I could do outside of what we already attempted to get our group mates to complete the work. This two person project with Tiara was fun despite all the setbacks provided to us by the other two members of the group.

Tiara

From an individually working perspective, I enjoyed this project quite a bit. It was nice to learn more about web development and further my CSS and HTML skills. It was also fun working with PHP and learning how to implement databases and run servers locally. It's definitely something I hope to experiment with more in the future. I did enjoy pair programming with Hudson, which is probably my only positive teamwork experience from this entire project. I've realized it's quite fun, despite the stress and lack of other team members, to stay up late eating fish tofu while stressing about bugs with a friend. Otherwise, from a team project perspective, I definitely did not have a great time trying to manage everyone and having to constantly remind team members to contribute. It was truly an ordeal getting everyone in the same room at the same time. We would all agree to meet at a certain time at least one day before the meeting. Then, people would often show up an hour late, several hours late, or not at all. Even when they did show up, instead of working they often played games, broke other people's electric skateboards, or did other work. Even if we finally got them to work on the project, they sat around asking others how to do their part, as if we didn't all start from the same base knowledge of absolutely nothing. Even when asked to implement the simplest of things, some team members would refuse, saying they didn't know how or that it was a waste of time. This member would then proceed to tell Hudson and I that our code was bad, that our implementation was bad, and that we should focus our priorities differently. Upon reminding that member that they also had access to the repository and editing rights, that member proceeded to say that they wouldn't know how to change it anyway. Ultimately, I had a good experience learning new skills to work on this project and working together with Hudson. I learned that picking team members is important and that team management is of utmost importance when working on a group project.

Tavish

After such a scathing review from Tiara and Hudson, it is tempting for me to match their levels of unprofessional conduct and write unconstructive, negative comments detailing all the shortcomings they presented as project partners. Instead, I am going to focus

on how the project played out from beginning to end from my perspective, then respond as politely as possible to the complaints directed specifically against me as a member of the team.

When the group met initially to discuss dividing up the work, I ended up being tasked with managing the live server and establishing communications between members. I initially created a GitHub Pages website, which took little effort on my part. However, we soon realized much of the PHP we wanted on the website would require a dedicated webserver. So, I began by going through the process of registering a domain name and purchasing a Digital Ocean webserver to host the website. With the webserver configured, I loaded the current GitHub build onto the webserver. The main page loaded fine, but several of the databases had to be modified to receive the proper permissions on the server. With the existing local version properly ported to the live version, I shifted my attention to learning how to implement the phpBB forums. After installing configuring phpBB, I created an admin account and a user account to create an example interaction on the forums. I learned how to do all of this for the first time, so along the way some errors cropped up. While setting up the databases in phpBB, I did not fully grasp how to properly link a database to the website during the install process. Because I had no partner in the group, I enlisted the help of another CS student who had some experience with phpBB to help me correctly link the database. After doing this I researched the possibility of implementing user to user chat from the database we currently used to store user information. After several hours of searching and asking around, I determined implementing chat with the current set up for the website was far enough beyond my area of expertise such that it would not be feasible to integrate modern live chat into the existing website. While the forums is by no means an ideal solution, with my level of expertise it was the best I could manage.

Frankly, having regular group meetings did not make sense regardless of how much work got done during them. My work had little to do with Hudson and Tiara's work, so even when we were all on task, I did not benefit from making time in my schedule to come to the meeting. But this was an aspect used to tear me down, so I figured I should address it.

The night before the final presentation, each member of our group stayed up together to wrap up the final changes we wanted to make before presenting the following morning.

After I got the forums working, Hudson asked me to add a button to the forums allowing a user to travel back to the main page. While I understood that this functionality would be useful, it was completely unrelated to the work I had done until that point. I would have to re-learn how to create the button, and then integrate it into the index page of phpBB. So, I told Hudson that because this idea was brought up at the last minute, that I would not be able to add the button. If he wanted to add it great, it's a good feature, but with such little time left my attention was better spent on seeing if live chat was still a possibility. This has been portrayed by Hudson and Tiara as me "refusing the simplest of things", which from my perspective is rather demeaning.

Furthermore, I take issue with two claims made by Tiara and Hudson about my conduct during our final group meeting. First, that I had asked other people to do my work for me. This is entirely false, and rather misleading characterization of how events unfolded from my perspective. This has to do with me asking for help during the installation of phpBB as mentioned above. Neither of me nor my friend knew the exact cause of the issue when we sat down, but with his additional expertise it saved me hours of headache researching the issue on my own. This has been portrayed as him doing my work for me, when from my perspective it is no different from Tiara and Hudson working on the website programming as two members of the same team. The second is how I told Tiara and Hudson "their code was bad, their implementation was bad, and they should focus their time doing other things" I have no idea how Tiara and Hudson took that from my statements, but I do not recollect stating anything of the sort directed at either one of them. I consider these statements to be utter libel meant to tear me down and paint an unflattering picture of me as an attempt to lower my grade on the project. I will not stand for it, and I will see to the fact these falsehoods do not harm my grading.

Lessons learned: I am incredibly disappointed that my project partners had absolutely nothing positive to say about my contributions to the project - stating the only thing they learned is that they should have had better judgement and not chosen me as a project partner in the first place. Much of this project was completed at the last minute by me, Tiara, and Hudson. I feel like my efforts and time spent on the project was completely taken for granted by my teammates. but they also frame me as being some sort of uncooperative, angry bully. Ultimately my teammates felt I deserved no constructive criticism or appreciation, so I hope I have represented my efforts to accurately portray my contributions from my own perspective.

Tiara and Hudson composed this document with absolutely no input from me, despite me trying to contact the two of them to work on it leading up to the deadline – clearly neither was interested in working with me any further, so they severed all communication.